ASSIGNMENT 1

Textbook Assignment: "Bombs, Fuzes, and Associated Components," chapter 1, pages 1-1 through 1-52.

1-1. The amount of time or vane revolutions needed for the firing train to be aligned after a bomb is released is known by which of the following terms?

1. Arming time
2. Functioning time
3. Nondelay time
4. Delay time

1-2. What term applies when the functioning time of a fuze is longer than 0.0005 second?

1. Instantaneous
2. Nondelay
3. Delay
4. Proximity

1-3. What term applies when the functioning time of a fuze is 0.0003 second or less?

1. Instantaneous
2. Nondelay
3. Delay
4. Proximity

1-4 What term applies when the functioning time of a fuze is 0.0003 to 0.0005 second?

1. Instantaneous
2. Nondelay
3. Delay
4. Proximity

1-5 The distance along the trajectory that a bomb travels from the releasing aircraft in an unarmed condition is known by which of the following abbreviations?

1. EEA
2. VT
3. SST
4. SAT

1-6 In reference to their primary operating principles, fuzes are normally divided into what two general classes?

1. Pneumatic and mechanical
2. Active and static
3. Electrical and pneumatic
4. Mechanical and electrical

1-7. You can determine if a fuze is safe or armed by what means?

1. By physical evidence of arming
2. By external evidence of arming
3. By physical evidence of safing
4. By external evidence of safing

1-8. Normally, electrical fuzes are charged after which of the following situations occur?

1. The bomb has been released from the rack or shackle
2. The bomb has been electrically disconnected from the aircraft
3. The pilot has initiated the charging circuit
4. The arming wire has pulled from the pop-out pin

1-9. For information on the fuzes currently used by the Navy, you should refer to which of the following NAVAIR publications?

1. 11-1F-2 only
2. 11-5A-17 only
3. 11-1F-2 and 11-5A-17
4. 16-1-529

1-10. The M904 series fuze is designed to be used in which of the following configurations?

1. The nose of Mk 80 series LDGP bombs only
2. The tail of Mk 80 series LDGP bombs only
3. The nose or tail of Mk 80 series LDGP bombs
4. The nose of rockets

1-11. An M904 series mechanical fuze can be configured for (a) what arming delay times in (b) what time increments?

1. (a) 4 to 20 sec
   (b) 2-sec increments
2. (a) 2 to 18 sec
   (b) 4-sec increments
3. (a) 4 to 20 sec
   (b) 4-sec increments
4. (a) 2 to 18 sec
   (b) 2-sec increments

1-12. Other than nondelay, what functioning delay times (in seconds) are provided by the M9 delay element?

1. 0.01, 0.025, 0.05, 0.1, and 0.25
2. 0.05, 0.10, 0.15, 0.20, and 0.25
3. 0.10, 0.20, 0.25, 0.30, and 0.35
4. 0.01, 0.025, 0.10, 0.15, and 0.20

1-13. What mechanical fuze should be used with the thermally protected Mk 80 series general-purpose bomb?

1. M904E1
2. M904E2
3. M904E3
4. M904E4

1-14. To set the 2- and 4-second arming delay times in the M904 mechanical time fuze, you should take which of the following actions?

1. Remove the stop screw
2. Depress the index locking pin
3. Rotate the knurled arming delay knob until the white index line is aligned with the desired arming delay time
4. Each of the above

1-15. You should NEVER try to reinstall the stop screw on an M904 mechanical time fuze in which of the following arming delay settings?

1. 2- and 4-sec
2. 6- and 8-sec
3. 12- and 14-sec
4. 16- and 18-sec

1-16. Which of the following conditions pertain to the M904 mechanical time fuze?

1. Safe and fully armed only
2. Partially armed and fully armed only
3. Safe, partially armed, and fully armed
4. Safe, armed, and unarmed

1-17. When the M904E4 mechanical time fuze is partially armed, what indication should you see in the upper observation window?

1. A red background with a white number 18
2. A green background with no numbers visible
3. A green background with a white number 18
4. A red background with no numbers visible

1-18. At what point is the firing train in an M904 mechanical time fuze fully aligned?

1. When the fuze impacts the target
2. When the functioning delay time elapses
3. When the preselected arming delay period elapses
4. When the arming vane revolutions are completed

1-19. Mk 339 Mod O and Mod 1 mechanical time fuzes are used in which of the following types of ordnance?

1. Fire bombs
2. Dispenser weapons
3. General purpose bombs
4. Underwater weapons

1-20. On a Mk 339 Mod 1 mechanical time fuze, what is the (a) factory preset primary functioning delay time and (b) optional functioning delay time?

1. (a) 2.1 sec
   (b) 4.0 sec
2. (a) 1.2 sec
   (b) 4.0 sec
3. (a) 2.1 sec
   (b) 0.4 sec
4. (a) 1.2 sec
   (b) 0.4 sec

1-21. You are checking the EEA of newer models of a Mk 339 Mod O and Mod 1 mechanical time fuzes. The fuze is considered armed if you see which of the following indications in the safe/arm indicator?

1. An intact green foil
2. A green foil pierced by an indicator pin
3. A red background in the lower observation window
4. A red background in the upper observation window

1-22. The functioning delay times for the Mk 346 Mod O mechanical, long-delay tail fuze are in what prescribed range?

1. 15 min to 33 min
2. 15 min to 33 hr
3. 30 min to 33 min
4. 30 min to 33 hr

1-23. The second-stage arming of a Mk 346 occurs at what point?

1. Upon impact
2. Immediately after the first-stage arming is complete
3. After the preselected time on the delay-to-burst timer elapses
4. Just before the weapon detonates

1-24. When used on the Mk 82 Mod 2 bomb, the Mk 68 Mod O thermal shield protects which of the following components ?

1. The tail adapter booster
2. The fuze and adapter booster
3. The thermal coupling
4. The funnel guide

1-25. If an aircraft returns to the ship from a mission with a Mk 346 configured bomb that has a fuze malfunction, which of the following actions should you. take?

1. Dispose of the bomb over the side of the ship
2. Notify the flight deck ordnance officer
3. Remove the fuze from the bomb on the flight deck
4. Transport the weapon below decks, and remove the fuze from the bomb

1-26. The Navy is currently using which of the following adapter boosters?

1. M148/T45E only
2. M148E1 only
3. M150/T46 only
4. M148/T45E, M148E1, and M150/T46

1-27. What adapter booster is used with a thermally protected bomb?

1. M148/T45
2. M148E1
3. M150/T46
4. M151

1-28. The Mk 344 and Mk 376 electric fuzes provide an all-electric capability for which of the following weapons?

1. Fire bombs
2. Airborne rockets
3. Mk 80 series bombs
4. Mk 20 and Mods cluster bombs

1-29. Arming delay times for Mk 344 and Mk 376 fuzes are automatically selected by what means?

1. A gag rod
2. A pop-out pin
3. A decelerometer
4. A Mk 31 safety device

1-30. If deceleration is NOT sensed by a Mk 31 safety device within 2.6 seconds after a free-fall weapon release, the fuze will arm in what maximum number of seconds?

1. 1.6 sec
2. 2.6 sec
3. 5.5 sec
4. 10.0 sec

1-31. When a Mk 344 electric fuze is used, arming is completed in what total number of seconds after the pop-out pin is released?

1. 10.0 sec
2. 2.6 sec
3. 5.5 sec
4. 6.2 sec

1-32. What device provides airburst capability for a bomb in both the unretarded and retarded delivery mode ?

1. Mk 43 Mod O
2. Mk 34 Mod O
3. Mk 46 Mod O
4. Mk 176 Mod 1

1-33. In a low-drag, general-purpose bomb, what percentage of the total weight is composed of explosives?

1. 45%
2. 55%
3. 60%
4. 70%

1-34. What series of low-drag, general-purpose bombs are currently in use in the Navy today?

1. Mk 100
2. Mk 80
3. Mk 50
4. Mk 40

1-35. A bomb body is shipped with a plastic plug installed in the nose and tail fuze wells to prevent what occurrence?

1. The explosive filler from spilling out
2. Damage to the external threads only
3. Moisture from entering the fuze wells only
4. Damage to the external threads and moisture from entering the fuze wells

1-36. What total number of Mk 83 general-purpose bombs can be placed on a metal pallet?

1. One
2. Two
3. Three
4. Four

1-37. When electric fuzing is used, a path for the charging current from the fuze-charging receptacle to the forward and aft fuze wells is provided by which of the following mechanisms?

1. The fuze-charging safety switch
2. The forward and aft charging tubes
3. The electronic circuit device
4. The electric fuze wire harness

1-38. A general-purpose bomb uses which of the following types of high-explosive fillers?

1. H-6 only
2. Tritonal 80-20 only
3. H-6 and Tritonal 80-20
4. Lead azide or TNT

1-39. A thermally protected general-purpose bomb is identified by which of the following markings?

1. Two yellow bands around the nose
2. Two white bands around the nose
3. Two yellow bands around the tail
4. Two white bands around the tail

1-40. Arming wire assemblies are used for what purpose?

1. To initiate the arming sequence of mechanical fuzes
2. To initiate the arming sequence of electrical fuzes
3. To actuate the fins on a Snakeye fin assembly
4. To maintain ordnance components in a safe condition until the actual release of a weapon from an aircraft

1-41. Premature or accidental withdrawal of an arming wire from a component is prevented by the installation of which of the following devices?

1. C clamps
2. Metal crimps
3. Safety clips
4. Plastic retainers

1-42. A conical fin assembly is used with what delivery mode?

1. High altitude
2. Unretarded only
3. Retarded only
4. Unretarded or retarded

1-43. A conical fin assembly is attached to the aft end of a bomb by what means ?

1. Cam locks
2. Setscrews
3. A quick-release clamp
4. A quick-release adapter

1-44. To prevent damage to an aircraft from ricocheting bombs or fragments during high-speed, low-altitude delivery, which of the following fin assembly configurations should be used with LDGP bombs?

1. Conical retarded mode
2. Snakeye retarded mode
3. Conical unretarded mode
4. Snakeye, unretarded mode

1-45. The MAU-91 fin is attached to a Mk 83 bomb by what means?

1. Nine setscrews
2. An ADU-320/B fin adapter
3. An MAU-93A/A fin adapter
4. A quick-release band

1-46. MAU-91A/B and B/B Snakeye fin assemblies are used on which of the following LDGP bombs?

1. Mk 81
2. Mk 82
3. Mk 83
4. Mk 84

1-47. To provide the pilot with in-fliqht selection capability, the swivel loop of a Snakeye fin release wire is connected to what component?

1. The nose arming solenoid
2. The arming wire retainer
3. The arming wire guide tube
4. The trail arming solenoid

1-48. Which of the following LDGP bombs can be configured as laser-guided bombs ?

1. Mk 82 only
2. Mk 83 only
3. Mk 84 only
4. Mk 82, Mk 83, and Mk 84

1-49. The computer-control group (CCG) of a laser guidance kit is used for what purpose?

1. To detect laser-illuminated targets only
2. To provide an attachment point for the guidance fins only
3. To detect laser-illuminated targets and to provide an attachment point for the guidance fins
4. To provide an attachment point for the wing assemblies

1-50. What kit should you use to configure an LDGP bomb to a DST?

1. Mk 73
2. Mk 74
3. Mk 75
4. Mk 76

1-51. Which of the following components is required with a Mk 42 firing mechanism?

1. A battery
2. An arming cable
3. An arming solenoid
4. A delay element

1-52. A Mk 20 bomb cluster is designed for use against which of the following targets?

1. Aircraft
2. Personnel
3. Armored vehicles
4. Light material

1-53. What total number of bomblets is contained in (a) the Mk 20 and (b) the CBU-59/B bomb clusters?

1. (a) 247 (b) 717
2. (a) 717 (b) 717
3. (a) 247 (b) 247
4. (a) 717 (b) 247

1-54. What fuze is used with Mk 20 and CBU-59/B bomb clusters?

1. Mk 333 Mod 1
2. Mk 346 Mod 0
3. Mk 339 Mod 0 or Mod 1
4. Mk 393 Mod 0 or Mod 1

1-55. The spring-loaded fins attached to the tail cone assembly of a Mk 7 bomb dispenser are secured in the closed position by which of the following retaining devices?

1. A fin release band assembly
2. A safety cotter pin
3. A fin release wire
4. A Fahnestock clip

1-56. A Mk 339 Mod 1 mechanical time fuze is used with what modification of a Mk 7 bomb dispenser?

1. Mod 1
2. Mod 2
3. Mod 3
4. Mod 0

1-57. What modification of a Mk 7 bomb dispenser is thermally protected?

1. Mod 1
2. Mod 6
3. Mod 3
4. Mod 4

1-58. The Mk 339 Mod 0 mechanical time fuze has what (a) primary or (b) optional time settings?

1. (a) 1.2 (b) 3.0
2. (a) 2.2 (b) 3.0
3. (a) 1.2 (b) 4.0
4. (a) 2.2 (b) 4.0

1-59. When both the primary and optional arming wires are pulled from the Mk 339 Mod 1 mechanical time fuze, the fuze will function within what time?

1. The optional time
2. The primary time
3. The delay time
4. The ground-impact time

1-60. When a tail fuze is NOT being used in a Mk 80 series practice bomb, which of the following bomb spotting charge adapters should you install to provide a visual indication of the weapon/target impact ?

1. Mk 89 Mod 0
2. Mk 90 Mod 0
3. Mk 91 Mod 0
4. Mk 92 Mod 0

1-61. What type of ammunition causes the most injuries to personnel?

1. Rockets
2. Missiles
3. Aircraft bombs
4. Practice bombs